

What is claimed is:

1. An information distribution system wherein a terminal apparatus, a display information transmitting apparatus, and a schedule transmitting apparatus are
5 interconnected over a network, wherein:

said display information transmitting apparatus comprises:

display information transmitting means for transmitting display information to the terminal apparatus
10 upon reception of a display information transmission request transmitted from the terminal apparatus; and

transmitting display information storage means for storing the display information,

said schedule transmitting apparatus comprises:

15 transmission schedule storage means for storing a schedule table that lists a plurality of schedules each of which is composed of a set of a display start time that specifies a time of day to bring display of the display information to start, an address that identifies the display information,
20 a display end time that specifies a time of day to bring the display of the display information to end and/or a display time that specifies a time required to display the display information;

selecting means for selecting a relevant schedule
25 obtained by retrieving, from the schedule table, a schedule whose display start time is close to a time of day received from the terminal apparatus, upon reception of the time of day from the terminal apparatus; and

schedule transmitting means for transmitting the
30 schedule selected by the selecting means to the terminal apparatus; and

said terminal apparatus comprises:

display means for displaying the display information;

an internal clock for giving a lapse of time;

screen saver for displaying a given image on the display

5 means when an operation to the terminal apparatus by a user is suspended for a certain period of time or more;

time of day transmitting means for transmitting the time of day given by the internal clock to the schedule transmitting apparatus when the given image is displayed
10 on the display means and when the time of day to bring display of the given image to end is getting close;

schedule receiving means for receiving the schedule from the schedule transmitting apparatus;

schedule storage means for storing the schedule received
15 by the schedule receiving means;

display information transmission request transmitting means for transmitting a display information transmission request to the display information transmitting apparatus with reference to the address listed in the schedule when the time
20 of day given by the internal clock reaches the display start time listed in the schedule stored in the schedule storage means;

display information receiving means for receiving the display information from the display information transmitting
25 apparatus; and

display control means for displaying the display information received by the display information receiving means on the display means.

2. The information distribution system as cited in claim
30 1, wherein:

said terminal apparatus further includes schedule

rewriting means for rewriting the schedule stored in said schedule storage means with the schedule received by said schedule receiving means, when there is a different portion in case when said terminal apparatus compares the schedule received by said schedule receiving means with the schedule stored in said schedule storage means;

said time of day transmitting means transmits the time of day given by the internal clock to the schedule transmitting apparatus at a predetermined interval during the time when said display information is displayed; and

said schedule rewriting means rewrites said schedule stored in said schedule storage means with the schedule received by said schedule receiving means, when there is a different portion in case of comparing the schedule received by said schedule receiving means with the schedule stored in said schedule storage means at the time when the schedule received by said schedule receiving means is the schedule transmitted from said schedule transmitting apparatus based on the time of day transmitted to said schedule transmitting apparatus at said predetermined interval.

3. The information distribution system as cited in claim 2, wherein:

said schedule rewriting means rewrites said schedule stored in said schedule storage means with the schedule received by said schedule receiving means, when either said display end time or said display time is different in case of comparing the schedule received by said schedule receiving means with the schedule stored in said schedule storage means.

4. The information distribution system as cited in claim 1, wherein:

said terminal apparatus further comprises display

information storage means for storing display information displayed on said display means.

5. The information distribution system as cited in claim 1, further comprising:

5 schedule correcting means interconnected to said terminal apparatus, said schedule transmitting apparatus, and said display information transmitting means for correcting the schedule stored in said transmission schedule storage means or display information stored in said transmitting display
10 information storage means.

6. The information distribution system as cited in claim 1, wherein:

 said display information is related to a television or radio program that is on the air at the time when the display
15 information is displayed on the display.

7. The information distribution system as cited in claim 1, wherein:

 said display information transmitting means further comprises encryption means for encrypting said display
20 information; and

 said terminal apparatus further comprises decryption means for decrypting said encrypted display information encrypted by said encryption means.

8. The information distribution system as cited in claim
25 1, wherein:

 said terminal apparatus further comprises last display information transmitting means for transmitting to said display information transmitting apparatus the last display information designating the display information displayed at
30 said display means when an operation by a user is carried out while displaying said display information; and

said display information transmitting apparatus further comprises counting means for counting the number of transmission for said display information to be transmitted as the last display information based on the last display information transmitted from said terminal apparatus.

9. The information distribution system as cited in claim 1, wherein:

a plurality of schedule tables is stored in said transmission schedule storage means; and

10 said terminal apparatus further comprises schedule table selecting means for selecting a schedule table to which the schedule to be transmitted by said schedule transmitting apparatus belongs.

10. A terminal apparatus interconnected with a display information transmitting apparatus for transmitting display information and a schedule transmitting apparatus for transmitting a schedule over a network, comprising:

display means for displaying the display information;

an internal clock for giving a lapse of time;

20 a screen saver for displaying a given image on the display means when an operation to the terminal apparatus by a user is suspended for a certain period of time or more;

time of day transmitting means for transmitting the time of day given by the internal clock to the schedule transmitting apparatus when the given image is displayed on the display means and when the time of day to bring display of the given image to end is getting close;

schedule receiving means for receiving a schedule composed of a set of a display start time that specifies a time of day to bring display of the display information to startup, an address that identifies the display information,

a display end time that specifies a time of day to bring the display of the display information to end and/or a display time that specifies a time required to display the display information;

5 schedule storage means for storing the schedule received by the schedule receiving means;

display information transmission request transmitting means for transmitting a display information transmission request to the display information transmitting apparatus with
10 reference to the address listed in the schedule when the time of day given by the internal clock reaches the display start time listed in the schedule stored in the schedule storage means;

display information receiving means for receiving the
15 display information from the display information transmitting apparatus; and

display control means for displaying the display information received by the display information receiving means on the display means.

20 11. The terminal apparatus as cited in claim 10, wherein:

said terminal apparatus further comprises schedule rewriting means for rewriting the schedule stored in said schedule storage means with the schedule received by said schedule receiving means, when there is a different portion
25 in case when said terminal apparatus compares the schedule received by said schedule receiving means with the schedule stored in said schedule storage means;

said time of day transmitting means transmits the time of day given by the internal clock to the schedule transmitting
30 apparatus at a predetermined interval during the time when said display information is displayed; and

said schedule rewriting means rewrites said schedule stored in said schedule storage means with the schedule received by said schedule receiving means, when there is a different portion in case of comparing the schedule received
5 by said schedule receiving means with the schedule stored in said schedule storage means at the time when the schedule received by said schedule receiving means is the schedule transmitted from said schedule transmitting apparatus based on the time of day transmitted to said schedule transmitting
10 apparatus at said predetermined interval.

12. The terminal apparatus as cited in claim 11, wherein:
said schedule rewriting means rewrites said schedule stored in said schedule storage means with the schedule received by said schedule receiving means, when either said
15 display end time or said display time is different in case of comparing the schedule received by said schedule receiving means with the schedule stored in said schedule storage means.

13. The terminal apparatus as cited in claim 10, further comprising:
20 display information storage means for storing display information displayed on said display means

14. The terminal apparatus as cited in claim 10, further comprising:
decryption means for decrypting said encrypted display
25 information.

15. The terminal apparatus as cited in claim 11, further comprising:

a last display information transmitting means for transmitting to said display information transmitting
30 apparatus the last display information designating the display information displayed at said display means when an operation

by a user is carried out while displaying said display information.

16. A schedule transmitting apparatus interconnected with a terminal apparatus and a display information transmitting apparatus for transmitting display information to the terminal apparatus over a network, comprising:

transmission schedule storage means for storing a schedule table that lists a plurality of schedules each of which is composed of a set of a display start time that specifies a time of day to bring display of the display information to start, a display end time that specifies a time of day to bring the display of the display information to end, a display time that specifies a time required to display the display information on a display means mounted to the terminal apparatus and an address that identifies the display information;

retrieval means for retrieving, from the schedule table, a schedule display start time of which is close to a time of day transmitted from the terminal apparatus, upon reception of the time of day from the terminal apparatus; and

schedule transmitting means for transmitting the schedule retrieved by the retrieval means to the terminal apparatus.

17. The schedule transmitting apparatus as cited in claim 16, wherein:

said transmission schedule storage means stores a plurality of schedule tables,

18. A display information transmitting apparatus connected with a terminal apparatus over a network, comprising:

transmitting display information storage means for storing display information to be transmitted to the terminal

apparatus; and

display information transmitting means for transmitting the display information stored in the transmitting display information storage means to the terminal apparatus upon reception of a display information transmission request transmitted with reference to an address from the terminal apparatus.

19. The display information transmitting apparatus as cited in claim 18, further comprising:

10 encryption means for encrypting said display information.

20. The display information transmitting apparatus as cited in claim 18, wherein:

15 said display information to be transmitted by said display information transmitting apparatus is related to a television or radio program that is on the air at the time when the display information is displayed on the display.

21. The display information transmitting apparatus as cited in claim 18, further comprising:

20 counting means for counting the number of transmission for said display information to be transmitted as the last display information based on the last display information transmitted from said terminal apparatus based on the last display information designating the display information
25 displayed on said display means.

22. An information distribution method adaptable to an information distribution system configured by interconnecting a terminal apparatus, a display information transmitting apparatus and a schedule transmitting apparatus
30 over a network, comprising the steps of:

allowing the terminal apparatus to transmit a time of

day given by an internal clock, which gives a lapse of time,
to the schedule transmitting apparatus, while displaying a
given image on display means when an operation to the terminal
apparatus by a user is suspended for a certain period of time
5 or more;

allowing the schedule transmitting apparatus to, upon
reception of the time of day from the terminal apparatus,
transmit a relevant schedule to the terminal apparatus by
retrieving, from schedules each of which is composed of a set
10 of a display start time that specifies a time of day to bring
display of the display information to startup, a display end
time that specifies a time of day to bring the display of the
display information to end, a display time that specifies a
time required to display the display information and an address
15 that identifies the display information, a schedule whose
display start time is close to the time of day transmitted
from the terminal apparatus;

allowing the terminal apparatus to, upon reception of
the above schedule, store the received schedule in a recording
20 medium, while transmitting a display information transmission
request to the display information transmitting apparatus with
reference to the address listed in the schedule when the time
of day given by the internal clock reaches the display start
time listed in the schedule stored in the recording medium;

25 allowing the display information transmitting
apparatus to, upon reception of the display information
transmission request, transmit the display information to the
terminal apparatus; and

allowing the terminal apparatus to, upon reception of
30 the display information from the display information
transmitting apparatus, display the received display

information on the display means.

23. The information distribution method as cited in claim 22, wherein:

5 said terminal apparatus transmits the time of day given by the internal clock to the schedule transmitting apparatus at a predetermined interval during the time when said display information is displayed;

10 said schedule transmitting apparatus retrieves said schedule by receiving the time of day transmitted by said terminal apparatus, and transmits to the terminal apparatus the schedule which has a start time close to the time of day transmitted by said terminal apparatus; and

15 said terminal apparatus receives the schedule transmitted by said schedule transmitting apparatus, and rewrites the schedule stored in the recording medium with the received schedule, when there is a different portion in case of comparing the received schedule with the schedule stored in said recording medium.

20 24. The information distribution method as cited in claim 23, wherein:

25 said terminal apparatus rewrites said schedule stored in said recording medium with the received schedule, when either said display end time or said display time is different in case of comparing the received schedule with the schedule stored in said recording medium.

25. The information distribution method as cited in claim 22, wherein:

30 said terminal apparatus records to the recording medium the display information transmitted by said display information by said display information transmitting means.

26. The information distribution method as cited in claim

22, further comprising:

schedule correcting means interconnected to said terminal apparatus, said schedule transmitting apparatus, and said display information transmitting means for correcting
5 either the schedule to be transmitted by said schedule transmitting apparatus or display information to be transmitted by said display information transmitting apparatus.

27. The information distribution method as cited in claim
10 22, wherein:

said display information is related to a television or radio program that is on the air at the time when the display information is displayed on the display.

28. The information distribution method as cited in claim
15 22, wherein:

said display information transmitting apparatus encrypts said display information; and

said terminal apparatus decrypts said encrypted display information.

29. The information distribution method as cited in claim
20 22, wherein:

said terminal apparatus transmits to said display information transmitting apparatus the last display information designating display information displayed at said
25 display means when an operation by a user is carried out while displaying said display information; and

said display information transmitting apparatus counts the number of transmission for said display information to be transmitted as the last display information based on the
30 last display information transmitted from said terminal apparatus.

30. The information distribution method as cited in claim 22, wherein:

a plurality of schedule tables is stored in the recording medium equipped to said schedule transmitting apparatus; and

5 said terminal apparatus selects a schedule table to which the schedule to be transmitted by said schedule transmitting apparatus belongs.

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